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# Pathways

## to Improved Student Performance

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# Massachusetts Department of Education

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# PATHWAYS TO IMPROVED STUDENT PERFORMANCE



Changing our schools and school systems to raise student performance is very challenging work. It takes time, and it requires the focused, sustained efforts of many individuals. It involves building new skills, changing attitudes and expectations, updating curriculum and instructional practices, breaking old habits and patterns, developing new processes for teacher collaboration and support. These changes are difficult to achieve even in the best of times. And these, as anyone who has followed the state budget news stories in recent months knows, are not the “best of times.”

Over the last year, many districts have had to downsize or eliminate important programs and services. Many schools have experienced significant reductions in staff and resources. The challenge: How to do more with less? How can we continue to push ahead in the effort to make our schools the best they can be in these trying times?

The answer: we work together. We bring our collective minds and hearts to the task. We learn to capitalize on each other's strengths and offset each other's weaknesses. We set goals, develop plans and build on individual talents and intellect to create a collective force to get the job done. This is the path we must follow to deliver on the promise that, in our schools, *no child is left behind*.

When we launched the Compass Schools Program three years ago, we did so to foster information sharing and collaboration among educators in schools across the Commonwealth. We set out to identify schools where work toward improving student achievement was yielding concrete results, disseminate information about successful practices, and celebrate the accomplishments of those whose efforts had yielded those results. We sought to provide an opportunity for school leaders and faculties to encourage and learn from one another.

The information contained in this year's Pathways to Improved Student Performance report is provided in support of that effort. I trust that the experiences school leaders and teachers will have at the third annual Pathways To Improved Student Performance conference in October and at on-site events hosted by the 2003 Commonwealth Compass Schools later in the year will broaden and deepen such collaboration.

These may be difficult fiscal times, but our Commonwealth is blessed with wealth of another kind. We have in our public schools highly skilled, knowledgeable and dedicated educators and administrators. We enjoy the challenges of this work, and we care deeply about the students that we serve. I am confident that, working together, we will continue improving our schools to support high achievement by all Massachusetts students.

David P. Driscoll  
Commissioner of Education



# PATHWAYS TO IMPROVED STUDENT PERFORMANCE

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# The Commonwealth **COMPASS SCHOOLS** Program

## Introduction

The Commonwealth Compass Schools Program was established in 2001. Its purpose is to identify schools that show significant improvement in student performance and facilitate the sharing of information on initiatives that have had a positive impact on student achievement. The ten 2003 Compass Schools, like their counterpart schools selected to serve as Compass Schools in 2001 and 2002, will receive public recognition at a State House ceremony in September. This event will kick off their year of service, during which they will participate in the Pathways to Improved Student Performance Conference in October and host two on-site information sharing events at their schools.

In the program's first two years participants have shared helpful information and ideas for improving student performance with hundreds of Massachusetts school and district administrators and teachers. Detailed information about improvement efforts that have been successful in diverse school settings is shared in workshops presented at the annual Pathways to Improved Student Performance Conferences each October. School administrators and teachers have opportunities to further explore issues of common interest during visits to the Compass Schools for information-sharing events that take place from February through April each year.

Principals of Compass Schools report that participation in the program has helped further their improvement efforts as well. Preparation of materials for the Pathways to Improved Student Performance Conference, and the give and take in discussion with colleagues from other schools

during on-site informational events have helped Compass principals and faculty members further clarify their own goals and have re-energized schools' improvement efforts.

## 2002 Commonwealth Compass Schools

Several of the 2002 Compass Schools exceeded the expectation that they host two on-site information-sharing events and scheduled additional special visits to accommodate teams from other schools. A number of the 2002 Compass Schools went out of their way to target their on-site visit activities to respond to the specific interests or questions of their guests, offering a pre-registration menu of options for the visits.

During site-based events attended by up to 20 visitors per session, participants:

- took part in a teachers' "First Steps" program focus group at the Bentley School in Salem;
- learned about personalizing education through the use of small learning communities at Brighton High School in Boston;
- learned about the systematic mechanisms being used to analyze student performance data to guide school improvement planning at Uxbridge High School and Brown Elementary School in Millis; and
- learned about Brockton High School's locally developed "literacy workshop" initiative.



Visitors to the 2002 Compass Schools heard about the programs and activities that have led to success at these schools, and saw how the initiatives described actually look in the classroom. They then had the opportunity to talk directly with teachers about the process of putting their strategies into practice.

The feedback we have received from the participants in the Compass School on-site activities reaffirms the value of providing opportunities for educators to visit other schools to share ideas, materials and successful approaches to improvement.



## 2003 Commonwealth Compass Schools Program

Profiles of the ten 2003 Commonwealth Compass Schools appear beginning on page 14 of this report. The profiles are intended to offer a snapshot of the 2003 Compass Schools and the improvements in performance achieved by their students. They highlight the programs and practices that school leaders and staff at the 2003 Compass Schools point to as having had the most positive effect on their students' performance. References to specific programs, curricula, or educational packages are strictly for informational purposes, and are not an endorsement by the Massachusetts Department of Education.

For more information on the 2003 Commonwealth Compass Schools Program activities, including the program planned for the Pathways to Improved Student Performance Conference in October and a calendar of the 2003 Compass Schools' on-site information-sharing events planned for February through April 2004, please consult the Department of Education Web site, [www.doe.mass.edu/ata](http://www.doe.mass.edu/ata).

# 2003 Pathways to Improved Student Performance Report

## Pathways to Improved Student Performance

2003 marks a watershed for standards-based education in Massachusetts. With the passage of the Education Reform Act of 1993 we set out on a new course toward high quality public education. We knew then that sweeping changes would be required in order to meet new, rigorous expectations for student performance. We knew too that it would take time to accomplish our ambitious education reform objectives. After ten years of hard work and commitment, we can now say with confidence that standards-based education is taking root in classrooms across the Commonwealth.

The story of this journey is told in the applications submitted by 184 schools invited to apply to the Compass Schools Program, and is well illustrated in the ten schools selected to serve as 2003 Commonwealth Compass Schools. Long-term investments in steady and methodical change are leading to substantial and sustained improvements in student performance.

Schools applying to the Compass School Program over the past three years report that increasing numbers of teachers are becoming involved in curriculum development and refinement that is based on an analysis of student performance

results. Teachers are working together to align their curricula to the Massachusetts Curriculum Frameworks. They are revising and refining instructional practices and materials to help their students meet the state's rigorous student learning standards. They are cultivating familiarity with standards-based education and learning how to bring its promise to fruition.

In the process, many teachers have developed a new relationship with the curricula they are expected to teach. They are using program texts and materials flexibly, not as a static teaching plan but as tool sets from which to build and manage a dynamic instructional program. Teachers' growing facility with using grade-level and classroom formative assessments is providing them with a means to better understand the needs of their students and to assess the effectiveness of the instruction they provide.





Principals and teachers alike report that regularly working together to identify strengths and weaknesses in their students' performance has, over time, sharpened their focus on student learning and caused them to change classroom practices. With explicit learning objectives in mind, teachers are able to look at student work as products generated in response to a particular unit or lesson, and use that feedback to determine what needs to be reviewed, further explained or practiced for students to master the material or skills being taught.

Not surprisingly, schools and districts that began working in earnest to implement standards-based instruction by the mid-nineties are furthest along in the process. Most of the 2003 Compass Schools are several years into the process of implementing state-aligned curricula and standards-based instruction. At this point, the schools are devising multi-pronged approaches to meet the needs of diverse learners and are making targeted refinements to their

curricula and instructional practices based on data from formative assessments.

Educators at these schools are able to talk about how and why a particular program meets their students' needs. They cite performance data to identify specific gaps in their programs. They are becoming skilled at bridging those gaps by augmenting existing curriculum packages and texts with teaching materials from a variety of sources. Some schools have changed the sequence or pace of instruction or course offerings to better achieve student learning objectives. Many have developed activities and lessons to reinforce specific skills. Several schools report that their teachers are spending more time on certain concepts that have proved difficult for all or some of their students to grasp.

Teachers have, of course, long been involved in developing their own curricula, units and lessons, as well as their own tests. What is new? We now have a set of shared and articulated

standards for student learning to drive and shape this work. To accomplish a defined set of student learning objectives school-wide coherence is necessary. With the advent of state learning standards, teachers have a common framework for their curricula and clear learning objectives for their students. At the 2003 Compass Schools, this is translating into notable academic performance gains for students.





## Approaches to Improving Mathematics Learning

Statewide, improvements in student performance in mathematics have been slower in coming than the gains made in English language arts. In an effort to enhance their students' mathematics learning, many districts and schools have updated their mathematics programs by adopting new instructional packages designed to expand students' critical thinking skills and encourage mathematical thinking and problem solving.



All of the elementary level 2003 Compass Schools have adopted a new math program or curriculum package in recent years, typically as part of a district initiative. At the Glenwood and Pottenger Schools in Springfield, both Mathland and Investigations in Numbers are being used at different grade levels. Everyday Learning Corporation/SRA is fully implemented in all grades at Academy Avenue in Weymouth and at Indian Head School in Hanson. Keverian School in Everett began using Scott Foresman in 2001.

These programs provide texts, curricula, and instructional materials. Substantial staff development to support the introduction of new instructional practices is often included in the service package. This is especially important to prepare the non-specialists teachers, who make up the majority of every faculty, to effectively present mathematical concepts and incorporate new mathematical thinking and problem-solving approaches into their teaching. A number of the 2003 Compass Schools have taken the introduction of new approaches to mathematics

instruction a step further, making the fostering of mathematical thinking a school-wide priority. Efforts are made to incorporate the teaching and reinforcement of mathematics concepts and skills across subject areas. School-wide activities like math competitions and a daily math problem done in all classrooms take place at several of this year's Compass elementary schools.

At Academy Avenue Primary School, "pre-algebra" concepts are being introduced at the 3<sup>rd</sup> grade to help lay the foundations for abstract thinking. Difficulty making the shift from concrete to abstract mathematical reasoning has been identified in the research as a stumbling block for many students in the middle grades. Academy Avenue teachers also supplement their core Everyday Learning Corporation/SRA math program, in which they have all been trained, with materials and units from other sources. Students do a lot of writing in math, and teachers are always looking for ways to incorporate math into other subject areas.





In addition to providing extra help during mathematics classes through small group or individual instruction, Indian Head Elementary School uses “math labs” to make their challenging mathematics curriculum more readily accessible to students with special needs and other struggling learners. Groups of six or eight students receive an extra hour per week of targeted instruction in their math lab, delivered by a math specialist and a teacher’s aide.

Raising mathematics achievement at the secondary level presents a double challenge. Teachers must address gaps in students’ basic skills, while teaching higher level conceptual thinking built on those skills. Only one of this year’s Compass high schools, Boston Arts Academy, reported having introduced a new mathematics program since 1998. They began using Interactive Mathematics during the 2002-2003 school year. At other high schools, efforts

to improve students’ mathematics performance have focussed on increasing the number of math courses required for graduation and changing the sequence of course taking. Some schools have, for example, introduced geometry in 7th grade and begun requiring all students to take algebra in either 8th or 9th grade. In some cases, the pacing of coursework

has been changed to better serve students who lack facility with grade-level mathematics concepts or skills.

As part of the concerted effort to improve mathematics instruction at Auburn High School, students having difficulty with mathematics are placed in yearlong Algebra I classes team-taught in a double block by a special education teacher and a math teacher. Boston Arts Academy requires parents to make a commitment in advance to the mandatory twice-a-week tutoring that will be required for any student who is struggling with mathematics. Students identified through a skills assessment at the end of the 9th grade must attend a four-week summer school program for two hours a day. During this program they focus on three key concepts/skills: equations, slope, and graphing. These foundation concepts and skills are taught and practiced using multiple approaches until students understand them.



## Targeting Struggling Learners

For many schools, the success of standards-based instruction rests on teachers' ability to identify the needs of, and provide targeted assistance to, struggling learners. At this year's Compass Schools, we found increasing sophistication with the use of student performance data. The substantial and sustained support provided to the teachers at these schools is enabling them to better serve their special education students and students with limited proficiency in English. They are also sharpening their ability to home in on students who are struggling with particular pieces of the curriculum, or are simply inadequately prepared for the work at their current grade levels.

This year, in addition to discussing their use of summative student performance data provided by MCAS, we heard more teachers talking about the importance and variety of the classroom assessments they are using as formative tools. Teachers at the Compass Schools reported that they are using a range of assessments, including tests and quizzes, weekly or monthly writing prompts, and brief interviews of their students to find out what their students do and do not understand. As teachers share those assessments with each other and look together at student work within grade levels they are developing a clear picture of the class and where each student

stands in relation to the standards at any given point in the school year. At Hyannis West Elementary teachers use this process to develop MCAS instructional plans for their classes and for individual students. They use assessment results to calibrate what and how they are teaching in their classroom, and how that fits in with what the other teachers in the school are teaching.

As teachers' skills with standards-based instruction and assessment increase, so does their capacity to respond to what assessment results tell them their students need. The power of this organic, collective approach to improving curriculum and instruction was apparent to the panels that visited the 2003 Compass Schools. Many of the panel reports emphasized the skill with which principals and teachers at the 2003 Compass Schools described how they use assessments to identify struggling learners, monitor the effectiveness of their instruction, and zero in on and remedy gaps that they discover in the curriculum.



## Training and Supporting Teachers

Extensive embedded training and sustained support for improved teaching has been provided at all of the 2003 Compass Schools. This training and support has enhanced teachers' capacity to adjust and refine curricula to meet standards, translate standards into classroom lessons and practices, and monitor the effectiveness of instruction. The size of the schools selected this year varies considerably from small elementary to large high school. The following chart gives an indication of the numbers of teachers at the 2003 Compass Schools who have received training in reading, writing and in mathematics, and the hours of training per year provided to facilitate the instructional changes made over the past three years.

The training reported in the chart below includes teachers' participation in both mandatory and voluntary professional development activities. Frequently, the training was on one or more components of a specific English language arts or mathematics program used by the school. In several cases the entire staff received training, one or two grade levels at a time, over a one to three year implementation timeframe. The 84 hours of training provided to Keverian School teachers included 24 hours in developing literacy, 24 hours in supporting literacy, 20 hours for responsive instruction, and 16 hours training to support struggling readers.

The entire staff at Boston Arts Academy received 25 hours of instruction on differentiating instruction from a professor at the Harvard Graduate School of Education. Fifteen staff

## Professional Training at the 2003 Compass Schools

School	Total # Teachers	ELA		MATH	
		# hrs/yr	# staff trained*	# hrs/yr	# staff trained*
Academy Avenue	16.5	20	14	12	14
Glenwood	31	15	33	12	32
Hyannis West	26	28	26	28	26
Indian Head	28	15	33	12	25
Pottenger	43	25	51	25	51
Keverian	33	84	50	25	40
Auburn HS	49	12.5	7	12	14
Blackstone Valley	88	6	100	3	90
Boston Arts	58	40	40	8	6
Ipswich HS	42	10	6	10	7

\* May include teachers and paraprofessionals



members have decided to continue related coursework and become certified in special education. All of the Hyannis West Elementary staff has received 28 hours of training to support English language arts and mathematics instruction at the school. Principals and teachers emphasize that the most effective training is embedded in the classroom and includes ongoing support as teachers put what they are learning into practice. This embedded support takes a number of forms. In many cases, outside support is provided by district level curriculum coordinators and coaches.

### **Teacher Collaboration to Enhance the Effectiveness of Instruction**

Teachers at the Compass Schools are gaining expertise by meeting regularly to discuss their students' work and to share lessons, assignments and activities with their colleagues. Teachers report that this professional collaboration has helped equip them to provide all of their students, in classes made up of individuals with different abilities, needs, and learning styles, with access to the same curriculum.

Teachers consistently point to their work together to improve instruction—looking at assessment results and student work, modeling lessons and making peer visits—as key to building and maintaining a community of learners

among their faculties. Teachers in the 2003 Compass Schools are receiving training and supporting their colleagues' with strategies such as:

- informal “teaching neighbor” approach which has expert teachers swap assignments to teach difficult concepts, compensating for differing levels of expertise of less experienced staff,
- small-scale demonstration workshops of successful lessons shared with their grade level colleagues,
- teacher mentoring programs that help clarify standards and goals for student learning,
- professional development partners who observe each other during the year for progress towards each one's personal goals related to the school-wide goals,
- partnering with higher education to bring current research into the classroom and classroom practice into the research, and
- “teacher-as-researcher” model of action research to improve instructional effectiveness.





Schools are making time for these activities by dedicating regularly scheduled common planning time, staff meetings and grade level team meetings exclusively to consideration of instructional issues. In many cases, teachers are meeting before or after school on an as-needed basis to maintain what one teacher referred to as a “continuum of reflection” on instructional practice.

### **Increasing Instructional Time**

To meet the challenge of providing a rigorous standards-based instructional program that covers essential skills and develops higher level thinking and communication skills, most of the 2003 Compass Schools have reorganized their schedules to increase instructional time in core areas. Three of this year's elementary schools report that they are now dedicating nine or more hours a week to reading instruction. Reading is the focus of instruction for 5-7 hours a week at the other three Compass elementary schools. Several of the schools report that 4-5 additional hours per week, beyond that allocated for reading, are spent on other components of their English language arts program that focus on building students' speaking, listening and writing skills. The weekly time allotment for mathematics instruction at the six Compass elementary schools ranges from 4 to 7 hours per week, with only one school reporting that less than an hour per day is spent teaching mathematics.

The four 2003 Compass high schools vary widely in the amount of instructional time per week that is dedicated to student instruction in English language arts and mathematics. At Blackstone Valley students spends 6 hours a week on each of these subjects. At Ipswich High School each subject is taught for three hours a week. At Boston Arts Academy, 9 hours of instructional time per week is devoted to English language arts and 4 hours to mathematics. Students at Auburn High School, in contrast, have 5.5 hours per week of mathematics instruction and 3.5 hours a week of instruction in English language arts. The amounts of time, as well as the forms of instruction and nature of student support services these schools provide, differ significantly. What these four schools have in common is their active efforts to match their instructional programs, and the allocation of time for those programs, to the particular learning needs of the students they serve.





Compass elementary school teachers and administrators report the use of various initiatives to enhance the time spent on learning during regular school hours. Hyannis West Elementary decreased class sizes by hiring more teachers and providing each classroom in grades 1-4 with a co-teacher for ninety minutes per day. Art, music, and physical education teachers are assigned to go into regular classrooms to provide MCAS remedial help and to assist in small group instruction for 45-minute blocks of time. Indian Head Elementary in Hanson provides special needs and struggling students with extra help from teachers or aides in small group or individual instruction in every math classroom. At the Academy Avenue School in Weymouth, some of the reported 7 hours of math and 15 hours of English language arts instruction is delivered through curriculum integration with other subject areas.

The strategies employed by this year's Compass high schools to provide more time for instruction are similarly varied. At Blackstone Valley Vocational Technical High School, to expand time for the delivery of a solid academic program and support the overall success of vocational technical students, the school year has been extended to 193 school days. Freshmen who enter Auburn High School at risk of failing mathematics are enrolled in a year-long, double block algebra class taught by two teachers. The principal and staff of Boston Arts Academy attribute the extraordinary improvements in their students' performance directly to the fact that they have added 45 minutes of writing and reading to the daily schedule by instituting a writing advisory period in which all staff are deployed to teach and support students' skill development.

Most of the 2003 Compass Schools report that extended time for instruction before, after and during the school day is being used to provide focused support for struggling learners. Three of this year's Compass high schools offer an average 120 hours of extra time on ELA instruction (40 students receive 3 additional hours per week). Ninety-five students at Auburn High School received 10 hours a week of additional instruction in mathematics last spring. Indian Head Elementary offers math labs for any student having difficulty keeping up with the pace of the districts' new math curriculum. Piloted by a special education teacher, the lab model provides flex groups of six to eight students with one hour per week of instruction delivered by a math specialist and a teacher's aide and targeted to specific skills. In each case, the key to the effectiveness of this extra time appears to be the coordination of this supplementary support with the instruction and services students receive during the regular school day.

In all of the 2003 Compass Schools, no matter what the size, grade levels served or geographic location, there are common threads to the story behind improving student results. When student learning, articulated in clear and measurable standards, becomes the focal point for collaborative educational decision-making in the school, substantial and sustained improvement in student achievement can be made. We congratulate this year's Compass School designees and hope that lessons from their struggles and victories will inspire and assist other school leaders and educators.

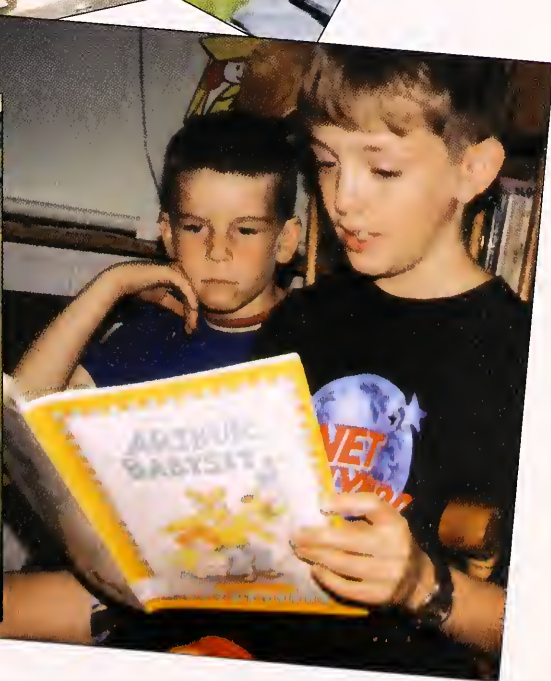


# 2003 Commonwealth C





# Compass Schools Profiles





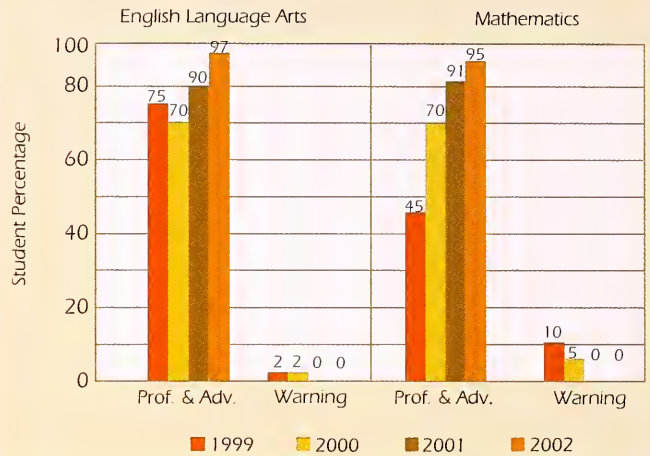
### Demographics

- 290 students: 91% white, 3% Hispanic, 2% African American, 3% Asian
- 10.9% eligible for free or reduced lunch
- 1.7% first language other than English
- 11% Special Education

### Improvement Profile

In 2002, 95 percent of Academy Avenue Primary School 4<sup>th</sup> graders tested in mathematics and 97 percent of those tested in English language arts scored in either the Proficient or Advanced categories on the MCAS test. Eighty-nine percent of grade 3 students taking the 2002 MCAS test in reading scored in the Proficient category.

### GRADE 4 STUDENT PERFORMANCE



### Strategies and Practices for Improving Student Performance

- Teacher-as-researcher approach to tracking instructional effectiveness
- Writing across the curriculum as a tool for improving student performance in all areas
- Teachers shape curriculum by integrating strategies and programs to target identified student learning gaps
- Pre-algebra introduced at 3<sup>rd</sup> grade

The Academy Avenue Primary School has shown steady improvement in student performance since the first administration of MCAS in 1998. As the MCAS graph above shows, student gains during Cycle II (2000-2002) were especially dramatic in mathematics. The Principal credits this achievement to the school's use of "teacher-as-researcher" strategies. Action research was instituted at the district level in 2000 as a vehicle for new teacher mentoring. It is the latest in a series of curricular and instructional improvements undertaken at the school over the past 10 years.

Action research in this case means that teachers meet to look at students work products and classroom assessment results to identify specific student learning needs. They use what they learn from this data to target strategies to address those needs. They assess the effectiveness of these interventions by looking again at students' work. Academy teachers have worked together over the past three years to design tools to analyze their student progress. They use tools such as monthly writing prompts that mirror MCAS opened-ended response questions to identify students' strengths and weaknesses.

The Academy Avenue School has clear and measurable standards for the work expected of all the school's students. Individual teachers adjust the curriculum to meet the needs of their individual classes. Frequent and clear communication is essential to making this flexibility within the instructional program work. Effective communication and on-going teacher collaboration fosters a collegial atmosphere of common purpose among staff at the Academy Avenue School.



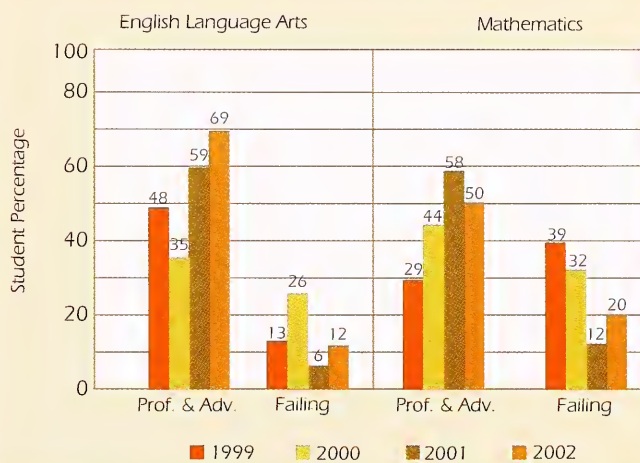
### Demographics

- 636 students: 96% white, 2% Asian, 1% African American, 1% Hispanic,
- 9% eligible for free or reduced lunch
- 1% first language other than English
- 12% special education

### Improvement Profile

Auburn High School made tremendous strides in both English language arts and mathematics in Cycle II (2001-2002), most notably in mathematics. Between 1999 and 2002, the percentage of students scoring in the Failing category on the MCAS mathematics test decreased by almost one-half, while those in Proficient and Advanced increased from 29 to 50 percent.

### GRADE 10 STUDENT PERFORMANCE



### Strategies and Practices for Improving Student Performance

- Double-blocked algebra co-taught by a mathematics and a special education teacher
- Early intervention for at-risk students
- Rotating course assignments

Auburn High School started the process of improvement by focussing on its strengths: a collaborative atmosphere, a concern for students, and frequent conversations among administration and staff. Over the past three years, the school has conducted extensive curriculum review and revision. Departments are developing curricula aligned to the frameworks, articulating specific goals for each course, and creating assessments to measure progress toward improvement goals. The Mathematics Department is furthest along in this process. Each year the staff uses MCAS and other student performance results to evaluate the effectiveness of the curricula for core subject areas and to formulate yearly action plans.

Teaching assignments are rotated regularly within each department to ensure that all teachers teach entry-level courses. Freshmen who are struggling with mathematics are registered in a double-blocked algebra course co-taught by a mathematics and a special education teacher for a full year. Mathematics support systems in place at the school include in-house assessments, after-school support, alternative assessments, and support from the Guidance Department. All are available until students pass the MCAS test.

### Demographics

- 847 students: 94.5% white, 2.5% Hispanic, 1.1% African American
- 9.1% eligible for free or reduced lunch
- 0.2% first language other than English
- 19.3% special education

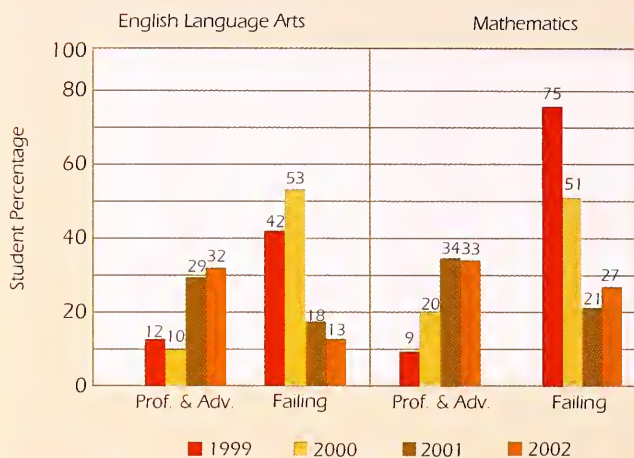
### Improvement Profile

Blackstone Valley High School performed significantly above its expected improvement targets for Cycle II (2001-2002). Between 1999 and 2002, the percentage of students scoring in the Proficient and Advanced categories on the MCAS test in English language arts almost tripled, while the percentage of students scoring in the Warning category in mathematics decreased by nearly two-thirds.

### Strategies and Practices to Improve Student Performance

- Integrated learning activities
- Integrated teaching methods
- Coordination of work in after school, summer camps and tutor-mentor programs
- Extended school calendar to 193 days

### GRADE 10 STUDENT PERFORMANCE



Blackstone Valley has developed an academic program that is proving highly successful for vocational technical students. Increased funding from state and local sources has allowed the school to extend its calendar year to 193 days and to hire additional staff. The result is a reduction in class sizes and more time for the staff to focus on areas in need of improvement. The core academic curriculum has been modified to address the state frameworks and learning standards. Computers are a part of every classroom, and all teachers use the same software to track student performance. The involvement of the entire Blackstone Valley faculty in curriculum planning and implementation enables teachers and administrators to make crucial connections between improvement initiatives, classroom instruction, and student learning goals.

The review panel that visited Blackstone in May cited "the virtual absence of an academic-vocational divide" at the school. Teachers provide opportunities for students to build core content skills across the technical and academic curriculum through experiential work projects. The result is that the teaching of literacy and mathematics skills is as evident in carpentry and culinary arts as it is in composition and geometry classrooms. School-wide strategic training and collaboration helps teachers integrate the school's standards-based curriculum into both academic and technical areas. To insure continuous implementation of the improvement efforts, all new teachers receive mentoring in cross-curricular planning and collaboration. "Simply put," says the Principal, "we have created a holistic learning environment."



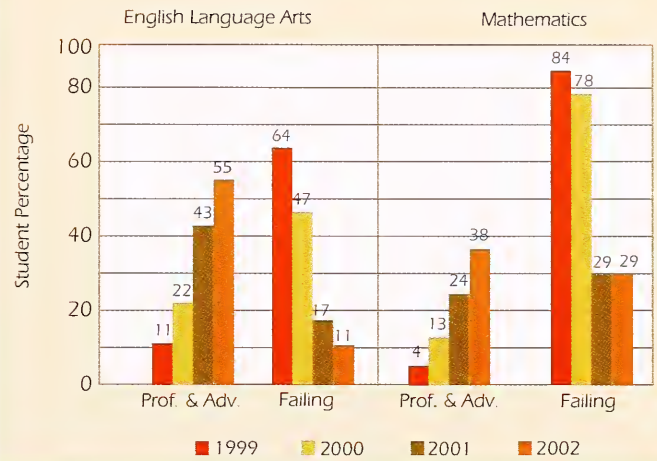
### Demographics

- 382 students: 47% African American, 26% white, 2 % Hispanic, 3% Asian
- 47% eligible for free or reduced lunch
- 14% first language other than English
- 14% special education

### Improvement Profile

During Cycle II (2001-2002) the Boston Arts Academy made extraordinary gains in student achievement in both English language arts and mathematics. The school improved performance at both ends of the performance spectrum, increasing the percentage of students in the Proficient and Advanced categories while reducing those in Warning. Boston Arts Academy was among the twenty most improved high schools in the state in Cycle II.

### GRADE 10 STUDENT PERFORMANCE



### Strategies and Practices for Improving Student Performance

- Integration of rigorous academic standards with demanding arts curriculum
- School-wide focus on writing
- Focused common planning time centered around school-wide goals
- Parent-school partnership for mandatory academic support when indicated

Boston Arts Academy has developed a highly effective model for infusing academic rigor and standards-based teaching into a demanding arts curriculum. One of the school's keys to success has been a school-wide focus on writing. Students learn and practice writing across the curriculum and all staff members have undergone substantial training to help them teach students to become critical readers and effective writers. Students do numerous presentations in their classes, and all classes include a writing component. Staff-developed rubrics set clear standards for quality writing that promote a common language for talking about writing and learning.

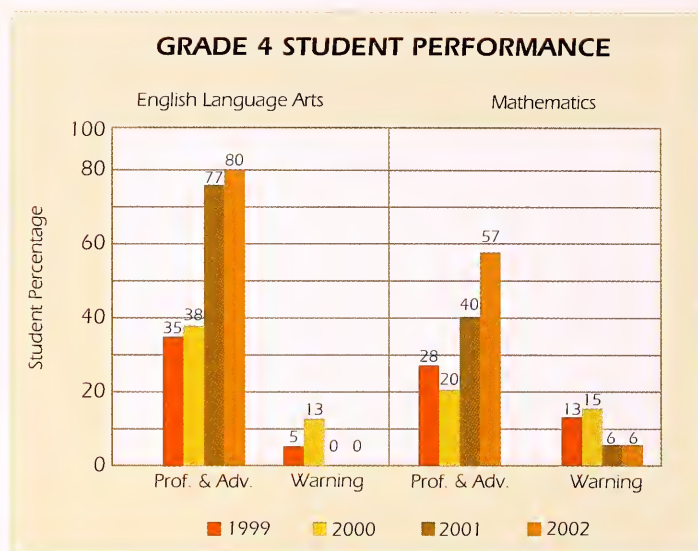
Boston Arts students are provided with numerous tools and strategies to develop as writers, including those suggested by the acronyms R.I.C.O.—Refine, Invent, Connect, Own and M.E.A.L.—Main idea, Evidence, Analysis, Links. The Principal credits 45 extra minutes a day, during which teachers and students participate in Writer's Workshop, for the impressive gains in English language arts. The extra 45-minute period is also used as a team-taught advisory period that culminates in a different writing project for all students at the end of each school year. The increased writing proficiency of seniors is further supported by the prerequisite that juniors must score a 3 (on a 4-point rubric) on the writing project before taking Senior Humanities. As a graduation requirement, seniors write grant proposals to be evaluated by an external committee. In order to graduate, seniors must earn a score of "proficient," with the committee recommending the top 20% of the proposals for funding. Incoming freshmen who have been identified as needing extra help in mathematics receive several forms of support, including mandatory after-school support services for a minimum of 2 hours a week and an additional daily mathematics class. Freshmen students who continue to struggle in mathematics are required to attend a four-week summer program.

### Demographics

- 377 students: 52% Hispanic, 34% white, 14% African American
- 71% eligible for free or reduced lunch
- 33% first language other than English
- 10% special education

### Improvement Profile

The Glenwood School has demonstrated dramatic improvement since 1998. There has been a steady increase in the percentage of students scoring in the Proficient and Advanced categories in both English language arts and mathematics. In 2002, 84 percent of students tested on the MCAS in English language arts, and almost 60 percent of those who took the MCAS in mathematics, scored in the Proficient and Advanced categories.



### Strategies and Practices for Improving Student Performance

- Literacy program
- Sheltered English instruction for special populations
- District service team initiative

Literacy has been the central focus of recent school improvement efforts at the Glenwood School. The school has incorporated several new programs over the past few years to develop the reading, writing, and speaking skills of all its students. The school has a team-taught literacy block, which was expanded to 2 hours in 1999, and extended to 2 1/2 hours in 2001. Strategic teacher training embedded in practice has been used to support the implementation of each component of the schools balanced literacy program. Training is sustained with ongoing support in the form of grade-level and service teams. Through this process, Glenwood teachers are increasing their capacity to help students with different learning styles, abilities, and levels of English language proficiency succeed in mastering a common set of learning expectations.

Sheltered English instruction was introduced in first grade during 2000 to better serve Glenwood's linguistically diverse student population. Students receive sheltered English instruction with native language support, as needed, until they demonstrate through assessments such as La Prueba and Iowa Tests Of Basic Skills that they have the skills needed to successfully handle mainstream classroom work.

Improvement initiatives at the Glenwood School are grounded in findings made from multiple, frequently administered assessments. Resources have been targeted to meet the needs of students who are struggling to master subject content or skills. The Glenwood was one of the first schools in the district to pilot the use of "service teams." Service teams consist of teachers, clinical professionals, and consultants who work as problem-solvers to help meet the academic and emotional needs of their students. As one teacher told the review panel that visited the school, "You're never on your own. Help is always available."

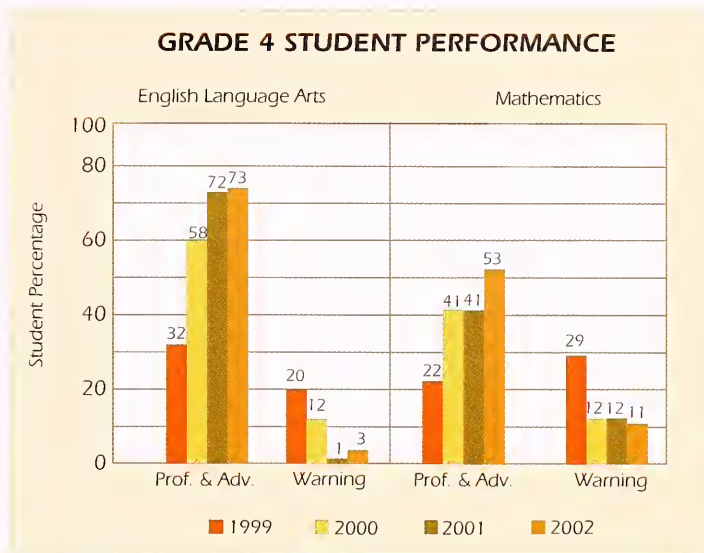


### Demographics

- 337 students: 72.9% white, 7.9% African American, 2.9% Asian
- 52.6% eligible for free or reduced lunch
- 9.7% first language other than English
- 7.4% special education

### Improvement Profile

Hyannis West Elementary was among the ten most improved schools in the state at the 4<sup>th</sup> grade in Cycle II (2001-2002). In 2002, almost three-quarters of the students taking the MCAS test in English language arts scored in the Proficient and Advanced categories. Between 1999 and 2002, the percentage of students scoring in Proficient and Advanced on the MCAS test in mathematics more than doubled, from 22 to 53 percent. Among students taking the MCAS grade 3 reading test in 2002, 73 percent scored in the Proficient category.



### Strategies and Practices to Improve Student Performance

- Lowered class size to a maximum of 15 students
- Research and data provide a clear blueprint for learning
- School Council plays key role in strategic planning, including data analysis
- Multi-grade “family groupings” create a sense of community and maintain consistency

Guided by the Comer Model of School Governance, the Hyannis West Elementary School Council has employed data and research to improve the school’s instructional program. The priority improvement initiative was to reduce class size to 12-15 students. The school accomplished this goal through the use of Title I and other funding to provide each classroom with a co-teacher for 90 minutes every day. Co-teachers work alongside classroom teachers to cooperatively plan and deliver multilevel instruction. In the area of literacy, the school council helped implement a school-wide reading plan and guided the school’s selection of research-based programs and strategies to meet identified student needs. Selected programs include Cooperative Learning, LINKS Writing, and Talents Unlimited.

Additional efforts to improve teaching effectiveness and monitor student performance are carried out by teams of teachers. Each year, teachers conduct an analysis of MCAS and Stanford 9 student performance data and make specific recommendations to the faculty for improving instructional practice. For the past two years, teachers have used assessment results to design instructional plans for reading, mathematics, writing and speaking. This effort allows teachers to develop a learning profile for the whole class as well as individual profiles for each student. In the area of school climate, the principal and staff point to the success of Responsive Classroom techniques in significantly reducing the behavioral disruptions that impede learning. School climate has been further enhanced by the organization of the school into multi-grade level family groupings. The grouping effort has helped create a sense of community and maintain consistency for a highly mobile student population.

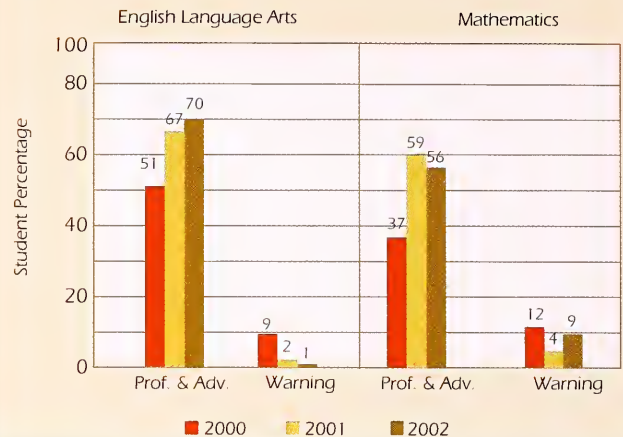
### Demographics

- 481 students: 97.1% white, 2.1% African American
- 12% eligible for free or reduced lunch
- 17.6% Special Education

### Improvement Profile

Indian Head was among the ten most improved schools in mathematics at the fourth grade in Cycle II (2001-2002). The percentage of students scoring in Proficient and Advanced on the MCAS mathematics test increased from 37 to 56 percent, the percentage in Warning decreased from 12 to 9 percent. The percentage of students scoring in Proficient and Advanced on the MCAS English language arts test increased from 51 percent in 2000 to 70 percent in 2002. Also in 2002, 51 percent of students tested on the MCAS grade 3 reading test scored in the Proficient category.

### GRADE 4 STUDENT PERFORMANCE



### Strategies and Practices for Improving Student Performance

- Extensive staff training in the areas of standards-based education, writing across the curriculum and Everyday Math
- Extra help in every classroom to support struggling learners
- Mathematics labs during the day and tutoring before or after school provide skill-based small group instruction and intervention

The substantial improvement in student performance at the Indian Head School is the result of efforts focused on implementing and supporting new curricula, monitoring teaching effectiveness, and ensuring consistent learning experiences across all grade levels. Prior to initiating the Everyday Math program five years ago, the district provided extensive training and workshops for the teaching staff. When budget cuts limited these opportunities, the school created a building level mathematics team to develop workshops and distribute student assessment data. The mathematics team also sets benchmarks for each grade level and provides detailed outcomes and pacing charts for lesson delivery. Mathematics team members are available to any teacher for consultation, coaching and peer observation. The principal cited the school's supplementary school day and after school support programs as keys to the dramatic improvement students have made in mathematics.

To further assist struggling learners, the school targets individual skills for development and assigns specialists and aides to every classroom during full class instruction. For students identified by teachers as needing additional support in mathematics, pull-out mathematics labs provide targeted instruction during the school day. The lab model provides teacher-guided, small group instruction, practice with classroom lessons, and active monitoring of student progress. All content areas are supported by additional tutoring time, made available through a collective bargaining agreement, in which all teachers provide at least one hour per week of after school help. This year the tutorial effort has been enhanced by a 21st Century Grant, which provides for an additional 30 hours of before and after school tutoring per week.

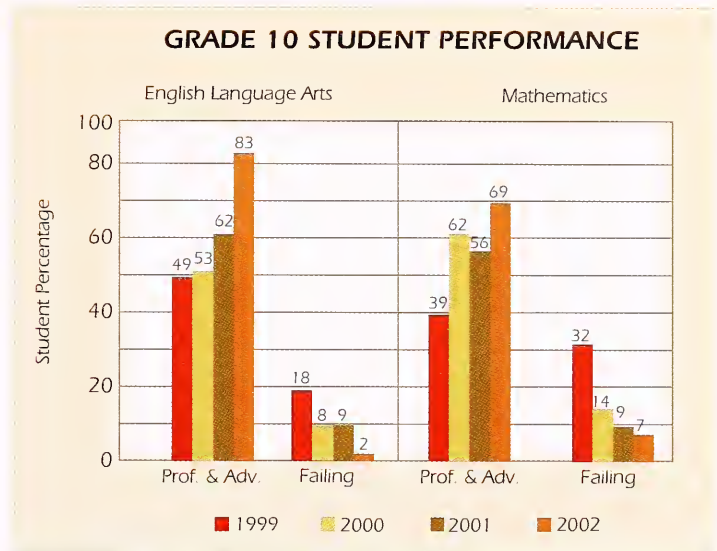


### Demographics

- 540 students: 97% white, 1% Hispanic, 1% African American, 1% Asian
- 8% eligible for free and reduced lunch
- 1% first language other than English
- 15% special education

### Improvement Profile

Ipswich High School exceeded its improvement target in Cycle II (2001-2002) in both English language arts and mathematics. Significant gains have been made since 1998 in increasing the percentage of students scoring in the Proficient and Advanced categories in both subjects. In 2002, an impressive 69 percent of students in mathematics, and 83 percent in English language arts, scored in the Proficient and Advanced categories on the MCAS test.



### Strategies and Practices to Improve Student Performance

- Integration of technology into daily instruction
- Staff development closely linked to technology supported learning
- District-level subject area committees analyze MCAS results, develop improvement plans and work together to refine curriculum

Ipswich High School has made a number of structural and organizational changes in recent years to promote student-centered instruction. Students at the school are encouraged to play an active role and accept responsibility for their own learning. Block scheduling was introduced in 1998 and teachers continue to receive training in the effective allocation of time within blocks. The school's block schedule provides time for faculty to use varied instructional groupings and a wide range of instructional strategies, including long-term projects. As a result of review and deliberations by faculty-led district curriculum development groups, refinements have been made to align ninth and tenth grade curricula to the state frameworks.

The district has worked hard to make technology an integral part of teaching and learning at Ipswich High School. Two weeklong summer technology courses for K-12 teachers have enhanced teacher's technology skills and helped them prepare technology-based lesson plans. There are five computers in every classroom at the high school and all teachers are equipped with laptop computers, which they used extensively for planning, assessment, and professional communication. Ongoing site-based professional development is closely linked to the school's underlying philosophy of student-centered, technology-supported learning. In technology classes, students, working along-side their teachers, are learning to use the latest 3-D computer assisted design software. New teachers at Ipswich High School are assigned a mentor within their subject area. Teachers are encouraged to visit each other's classrooms to observe and learn from one another. As one faculty member put it: "You never stop learning here."

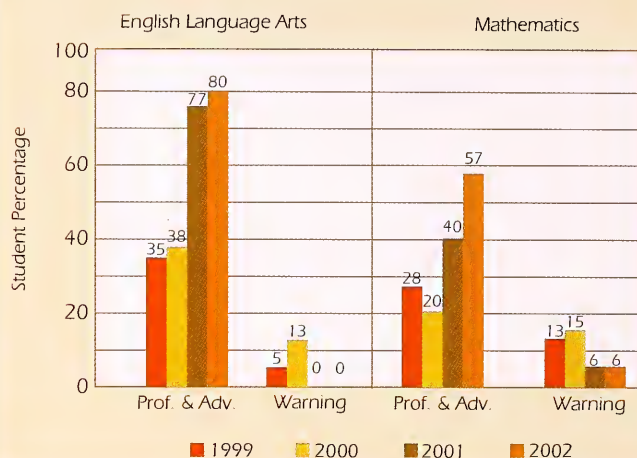
### Demographics

- 548 students: 77% white, 9% Hispanic, 7% African American, 7% Asian
- 48% eligible for free or reduced lunch
- 31% first language other than English
- 10% special education

### Improvement Profile

Formerly the Webster School, the newly named George Keverian School achieved significant gains in Cycle II (2001-2002) in both English language arts and mathematics. Between 2000 and 2002, the percentage of students scoring in the Proficient and Advanced categories on the MCAS grade 4 mathematics test almost tripled. In English language arts, improvement was even more dramatic, where the percentage of students scoring in Proficient and Advanced increased from 5 percent in 2000 to 80 percent in 2002. Also in 2002, 83 percent of students tested on the MCAS grade 3 reading test scored in the Proficient category.

### GRADE 4 STUDENT PERFORMANCE



### Strategies and Practices to Improve Student Performance

- School MCAS Action Plan
- Instructional focus on literacy
- Rigorous approach to instructional planning and teacher evaluation
- School climate focused on caring, collaboration and community

The Keverian School has improved student performance by developing a yearly blueprint for analyzing MCAS test results, designating strengths and weaknesses in student learning and focusing instruction on student needs. All staff regularly receives MCAS and IOWA tests data and use the results to better provide for their students. An MCAS Action Team, made up of teachers and support staff organized by grade level, issues an annual summary of school-wide findings that provides strategies, activities, and resources to be used during the school year. A Massachusetts Reading Excellence Grant helps further advance school improvement efforts. The grant funds professional development and supports the implementation of a balanced literacy program that emphasizes interactive reading, writing and language arts at all grade levels. It also supports training in phonemic awareness, guided reading, and flexible grouping at the primary grades.

Other professional development activities include a "teachers-training-teachers" initiative and a number of embedded learning opportunities that are collaborative and allow teachers to develop lesson plans and share best practices during the school day. The school's collaborative efforts have enabled art, music and physical education teachers to support regular classroom instruction as well as MCAS remediation during a 45-minute block each day. The Guidance Department keeps the school community informed of these and other efforts by coordinating regular communication between parents, teachers, and the administration.

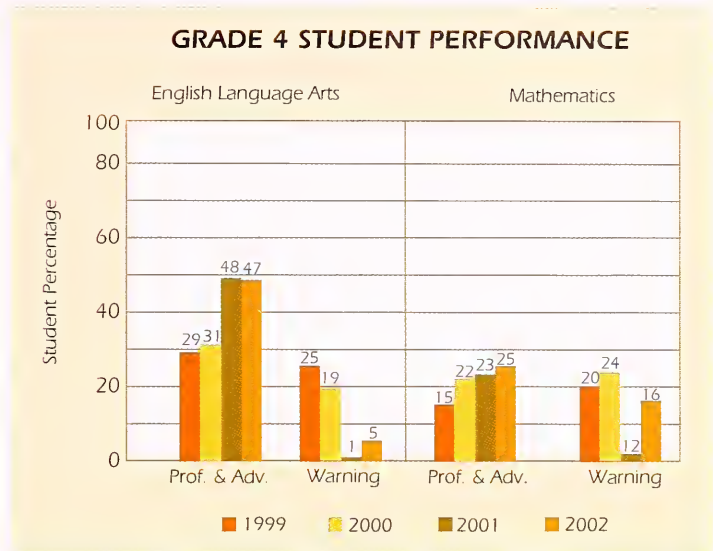


### Demographics

- 472 students: 58.4% Hispanic, 21.1% African American, 19.6% white, 1% Asian
- 85.7% eligible for free or reduced lunch
- 14.4% first language other than English
- 13.9% special education

### Improvement Profile

Pottenger School's most impressive gains in Cycle II (2001-2002) were in English language arts. The school far surpassed its expectations for improvement with 47 percent of students scoring in Proficient and Advanced on the MCAS grade 4 English language arts test.



### Strategies and Practices for Improving Student Performance

- Adoption of the Principles of Learning – Institute for Learning, University of Pittsburgh
- Balanced literacy approach that values oral communication to support reading and writing instruction
- Reflecting on teaching and learning
- Partnerships with higher education institutions

Improvement efforts during the past three years at the Mary O. Pottenger School have been grounded in the Principles of Learning developed by the Institute for Learning at the University of Pittsburgh. Among the key concepts that the staff have focused on are clear expectations, academic rigor, and organizing for effort. The school is also implementing a balanced literacy model that includes instruction in text comprehension, vocabulary, fluency, phonics, and phonemic awareness. The literacy model is part of a larger district reading initiative that is supported by ongoing professional development and common planning time.

The Pottenger faculty makes strategic use of 1.5 hours of common planning time per week (by contractual agreement) during which teachers share best practices and look at student work. Teachers report that the Developmental Reading Assessment, as well as rubrics developed in part by students, have helped raise classroom standards and allowed teachers to provide more effective instruction. The resulting emphasis on standards provides multiple opportunities for students to speak, listen, formulate and articulate questions with an emphasis on self-evaluation. Pottenger students are also benefiting from several higher education partnerships. Several teachers are working with faculty from Westfield State College to plan reading lessons that address the needs of all learners. Other school faculty members are working as "teacher-researchers" with University of Massachusetts and Boston College professors to use literature, basal readers, and other materials to support struggling readers.

# THANK YOU TO THE 2002 COMPASS SCHOOLS

## **The 2002 Commonwealth Compass Schools**

**T**he fifteen 2002 Commonwealth Compass Schools completed their year of active service in late April. The Department would like to thank the principals and their staff for their work over the past year. Thanks to their level of commitment, the clarity and quality of the materials they presented at the Pathways to Improved Student Performance, and their extra efforts to make their on-site information-sharing events substantive and useful to those that visited their schools, the Program has reached a new level of maturity.

**Balliet Elementary School**, Springfield

**Bentley School**, Salem

**Brighton High School**, Boston

**Brockton High School**, Brockton

**Clyde F. Brown Elementary School**, Millis

**Cobbet Elementary School**, Lynn

**East Bridgewater High School**, East Bridgewater

**Fuller Middle School**, Framingham

**Melrose Veterans Memorial Middle School**, Melrose

**Methuen High School**, Methuen

**Richard J. Murphy School**, Boston

**Norrback Avenue School**, Worcester

**Frank M. Sokolowski School**, Chelsea

**Somerset High School**, Somerset

**Uxbridge High School**, Uxbridge



## Notes

## Notes



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